

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-16. (Cancelled)

17. (New) A device for varying compression ratio of an internal combustion engine having at least one cylinder including a combustion chamber, a piston translationally movable under action of a connecting rod that is connected by a shaft to the piston and connected to a crankpin of a crankshaft, the piston travelling between top dead center and bottom dead center which provides a dead volume at the top dead center of the piston, a rotary pull eccentric slidably disposed between the crankpin and the connecting rod for varying the compression ratio and means for controlling the movement of the eccentric, wherein the control means includes a hydraulic cylinder comprising a slide in a recess in a support and including fluid chambers in communication with at least one closed circuit, the closed circuit including at least one valve for controlling a flowrate of fluid from one chamber to another chamber, and the at least one valve comprises a piezoelectric device.

18. (New) A device for varying the compression ratio according to claim 17, wherein the fluid chambers are in communication with each other via at least one closed circuit.

19. (New) A device for varying the compression ratio according to claim 17, wherein the at least one valve is an at least a two-way valve.

20. (New) A device for varying the compression ratio according to claim 17, wherein the piezoelectric device includes a needle valve and a piezoelectric actuator.

21. (New) A device for varying the compression ratio according to claim 17, wherein the piezoelectric device is controlled by cooperation of contacts and electrical segments.

22. (New) A device for varying compression ratio of an internal combustion engine having at least one cylinder including a combustion chamber, a piston translationally movable under action of a connecting rod that is connected by a shaft to the piston and connected to a crankpin of a crankshaft, the piston travelling between top dead center and bottom dead center which provides a volume at the top dead center of the piston, a rotary pull eccentric slidably disposed between the crankpin and the connecting rod for varying the compression ratio and means for controlling the movement of the eccentric, wherein the control means includes a hydraulic cylinder comprising a slide in a recess in a support and including fluid chambers in communication with at least one closed circuit, the closed circuit including at least one valve and at least one metering device located downstream of the at least one valve.

23. (New) A device for varying the compression ratio according to claim 22, wherein the at least one metering device includes a piston-cylinder assembly including a calibrating spring.

24. (New) A device for varying the compression ratio according to claim 17, wherein the at least one closed circuit is at least partly in the hydraulic cylinder.

25. (New) A device for varying the compression ratio according to claim 17, wherein the eccentric includes means for locating a position of the rotary pull eccentric.

26. (New) A device for varying the compression ratio according to claim 25, wherein the means for locating comprises a signal transmitter-receiver assembly.

27. (New) A device for varying the compression ratio according to claim 26, wherein the eccentric includes the transmitter and the receiver is in a fixed part of the engine.

28. (New) A device for varying the compression ratio according to claim 17, wherein the eccentric includes means for engaging the slide.

29. (New) A device for varying the compression ratio according to claim 28, wherein the means for engaging includes a toothed sector mounted on the eccentric and a toothed rack mounted on the slide.

30. (New) A method for varying the compression ratio of an internal combustion engine, having at least one cylinder including a combustion chamber, a piston translationally movable under action of a connecting rod that is connected by a shaft to the piston and connected to a crankpin of a crankshaft, the piston travelling between top dead center and bottom dead center which provides a dead volume at the top dead center of the piston, a rotary pull eccentric slidably disposed between the crankpin and the connecting rod for varying the compression ratio and means for controlling the movement of the eccentric, wherein the control means includes a hydraulic cylinder comprising a slide in a recess in a support and including fluid chambers in communication with at least one closed circuit, the closed circuit including at least one valve for controlling a flowrate of fluid from one chamber to another chamber, and the at least one valve comprises a piezoelectric device, comprising:

- determining a desired compression ratio of the engine;

- determining a displacement of the rotary pull eccentric to obtain the desired compression ratio; and

- controlling rotation of the eccentric to obtain the determined displacement by controlling the hydraulic cylinder to command the displacement of the eccentric.